FOLDABLE MASSAGING BED REST

FIELD OF THE INVENTION

The present invention is generally related to a massaging bed rest, and more particularly is related to a massaging bed rest with rotatable armrests.

BACKGROUND OF THE INVENTION

Cushioned bed loungers are known in the art. Bed loungers normally include a back portion and arm rests or elbow rests. The back portion may be contoured and may include a padded neck or head rest. Chair back massagers also are known in the art. One form of prior art back massager is in the form of a pad containing a mechanical massage arrangement powered by electricity. In use, a person places the massager against the back of a chair, automobile seat, or couch and then sits downs and leans back against the massaging device. Other configurations have the massaging elements built into the seat back, for example in a lounge chair or automobile seat. Such massagers include a back portion including a massaging element driven by an electric motor.

United States Patent Number 5,895,365, by Tomlinson, discloses a bed rest cushion for providing a vibrating massage including a back portion and two armrests. The two armrests are pivotally coupled to the back portion. However, the armrests are coupled to allow the armrest to rotate outward from the back portion. The armrests do not rotate about the sides of the back portion. The rotation of the bed rest cushion described by Tomlinson does not facilitate storage of the bed rest cushion, nor using the bed rest as a flat massaging cushion for placement in a chair or under the chest of a person when laying down on their stomach.

Thus, a heretofore unaddressed need exists in the industry to address the aforementioned deficiencies and inadequacies.

SUMMARY OF THE INVENTION

In one aspect, the invention features a foldable massaging bed cushion for supporting a person in a sitting position. The massaging bed cushion contains a backrest with two side edges, two armrests rotatably coupled to the backrest, and one or more massaging units within the backrest. The two armrests can rotate from a sitting position to a folded position along the two side edges of the backrest.

The two armrests can be perpendicular to the backrest in the sitting position. In addition, the two armrests can rotate from zero to one hundred and eighty degrees from the backrest. The sitting position is formed by rotating the two armrests from about forty-five to about one hundred and thirty-five degrees from the backrest. Preferably, the sitting position is formed by rotating the two armrests to ninety degrees (90°) from the backrest. The backrest and the two armrests can form nearly a rectangular top profile in the folded position.

Other features and advantages of the present invention will be or become apparent to one with skill in the art upon examination of the following drawings and detailed description. It is intended that all such additional features and advantages be included within this description, be within the scope of the present invention, and be protected by the accompanying claims.

BRIEF DESCRIPTION OF THE DRAWINGS

Many aspects of the invention can be better understood with reference to the following drawings. The components in the drawings are not necessarily to scale, emphasis instead being

placed upon clearly illustrating the principles of the present invention. Moreover, in the drawings, like reference numerals designate corresponding parts throughout the several views.

FIG. 1 is a perspective view of the massaging cushion unfolded for use in a sitting position, in accordance with a first exemplary embodiment.

FIG. 2 is a side view of the massaging cushion of FIG. 1 unfolded for use in the sitting position.

FIG. 3 is a front view of the massaging cushion of FIG. 1 unfolded for use in the sitting position.

FIG. 4a is a block diagram illustrating interaction of the interior components of the massaging cushion of FIG. 1, in accordance with the first exemplary embodiment of the invention.

FIG. 4b is a block diagram illustrating the interaction of the interior components of the massaging cushion of FIG. 1, in accordance with a second exemplary embodiment of the invention.

FIG. 5 is a perspective view of the massaging cushion of FIG. 1 folded into a storage position or for use in a laying down position.

FIG. 6 is a top view of the massaging cushion of FIG. 1 folded into a flattened position for use in a laying down position or for storage in accordance with the first exemplary embodiment of the invention.

FIG. 7 is a perspective view of a massaging cushion folded into a flattened position for use in a lying down position or for storage in accordance with a third exemplary embodiment of the invention.

DETAILED DESCRIPTION

FIG. 1 is a perspective view, FIG. 2 is a side view, and FIG. 3 is a front view of the massaging cushion **100** unfolded for use in a sitting position, in accordance with a first exemplary embodiment of the invention. The massaging cushion **100** comprises a backrest **102**, a right armrest **104**, and a left armrest **106**. An axle **108** couples the right armrest **104** and left armrest **106** to the backrest **102**. In addition, the axle **108** runs through a lower portion **110** of the backrest **102**. The axle **108** allows the right armrest **104** and left armrest **106** to rotate about the backrest **102** as indicated by the arrows shown in FIG. 1 and FIG. 2. When the massaging cushion **100** is unfolded into a sitting position, the user sits between the right armrest **104** and left armrest **106**. The right and left arms of the user rest on the right armrest **104** and the left armrest **106**, respectively. The back of the user rests on a front surface **118** of the backrest **102** of the massaging cushion **100**. The weight of the arms and upper body of the user rests upon the right armrest **104** and left armrest **106**. The weight on the armrests **104** and **106** upon the floor provides a frictional force that prevents the backrest **102** from sliding backwards when using the massaging cushion **100** in the sitting position. Alternatively, while resting on the massaging cushion **100**, a back surface **120** of the backrest **102** may be leaned against a wall, a back portion of a bed, or any other surface that will prevent the backrest **102** from moving backward.

The axle **108** allows the right armrest **104** and left armrest **106** to rotate about the backrest **102**. In the first exemplary embodiment, the right armrest **104** and left armrest **106** can rotate one hundred and eighty degrees from the backrest **102**. When the massaging cushion **100** is in the sitting position, the right armrest **104** and left armrest **106** are rotated between about ninety degrees to about one hundred and twenty degrees from the backrest **102**. The lower backside of the user prevents the backrest **102** from rotating out of the sitting position. The user

can adjust the slant of the backrest **102** by moving the lower backside of the user closer or further away from the lower portion **110** of the backrest **102**. By moving the lower backside of the user closer to the backrest **102,** the angle between the armrests **104** and **106** and the backrest **102** is decreased. By moving the lower backside of the user further away from the lower portion **110** of the backrest **102**, the backrest **102** is allowed to rotate, increasing the angle between the armrests **104** and **106** and the backrest **102**.

The left armrest **106** and right armrest **104** may rotate about the axle **108** together or separately. As an example, movement of the left armrest **106** may force the right armrest **104** to rotate with the left arm rest **106**. Alternatively, the left armrest **106** may rotate about the axle **108** independent from the right armrest **104** These different examples of movement of the left armrest **106** and right armrest **104** may be made possible by a series of gears, joints, or any other device known by those having ordinary skill in the art that may allow and/or limit rotation about the axle **108**.

In another embodiment, a rotation latch (not shown) can be used to prevent the backrest **102** from rotating out of the sitting position. The rotation latch prevents the right armrest **104** and left armrest **106** from rotating beyond a desired angle from the backrest **102**. For example, the rotation latch can allow the backrest **102** to rotate one hundred degrees from the right armrest **104** and the left armrest **106**. This allows the massaging cushion **100** to remain in the sitting position without relying on support from the arms and lower backside of the user. In addition, the rotation latch can also be an adjustable latch that allows the user to set a maximum angle of rotation. This allows the user to customize and set the maximum angle between the armrest **104**, **106** and the backrest **102** that is allowed by the massaging cushion **100**.

A control panel **112** located on a top surface of the right armrest **104** allows the user to activate one or more massaging units **114** and one or more heating units **116**. The location of the control panel **112** provides easy access by the hands of the user when the user is being supported by the massaging cushion **100** adjusted to the sitting position. The control panel **112** is not limited to being located on the top surface of the right armrest **104**. The control panel **112** can instead be mounted on a variety of different locations and surfaces of the massaging cushion **100**. The control panel **112** can contain various displays, switches, and knobs used to control the one or more massaging units **114** and the one or more heating units **116**. For example, the knobs or switches can be used to control the amount of heat provided by the heating units **116**. The knobs or switches can also be used to control the massaging intensity and motion of the massaging units. The display can be a Light Emitting Diode (LED) display that shows the current settings of the one or more massaging units **114** and one or more heating units **116**.

The one or more massaging units **114** can be located within the backrest **102**. In addition, the one or more massaging units **114** can be built into the cushion of the backrest **102**. The massaging units **114** can be a variety of massaging devices arranged within the backrest **102,** for example, but not limited to, massage motors, pulsating transducers, and powered rollers. The location of the massaging units **114** can be a variety of locations and surfaces on the massaging cushion **100,** for example, but not limited to, the top surface or inside surface of the armrests **104** and **106**.

Along with the one or more massaging units **114,** the massaging cushion **100** can also have the one or more heating units **116**. Similar, to the massaging units **114,** the one or more heating units **116** can also be built into the cushion of the backrest **102**. The heating units **116** also can be located in a variety of locations and surfaces of the massaging cushion **100**. In

addition, the heating units **116** may be located within the armrests **104, 106**. During use, the heating unit **116** can generate heat when current is applied to the heating element. Other means for providing heat would be known by those having ordinary skill in the art.

The control panel **112** can regulate both the one or more massaging units **114** and the heating units **116**. The control panel **112** can also selectively activate the massaging units **114** and heating units **116** in a variety of patterns, providing different massaging sequences. These sequences can be stored in a memory of the control panel **112**. A user can select a desired sequence on the control panel **112** and the control panel **112** can activate the different massaging units **114** and heating units **116** based on the selected pattern of the user.

FIG. 4a is a block diagram illustrating interaction of interior components **400a** of the massaging cushion **100** in accordance with a first exemplary embodiment of the invention. The control panel **112a** can be electrically coupled to each massaging unit **114a** and each heating unit **116a**. A power source **402a** supplies the power to operate the control panel **112a**. The control panel **112a** selectively supplies power to each of the massaging units **114a** and each of the heating units **116a** depending on the control panel **112a** setting. The control panel **114a** controls each massaging unit **114a** and each heating unit **116a** by varying the amount of current supplied to each massaging unit **114a** and each heating unit **116a**.

FIG. 4b is a block diagram illustrating interaction of interior components **400b** of the massaging cushion **100** in accordance with a second exemplary embodiment of the invention. The power source **402b** can be electrically coupled to the control panel **112b**, the one or more massaging units **114b**, and the one or more heating units **116b**. The power source **402b** supplies power directly to each component. The control panel **112b** can be electrically coupled to each massaging unit **114b** and each heating unit **116b** or the control panel **112b** can be connected to

each massaging unit **114b** and each heating unit **116b** by wireless communication. The control panel **112b** signals each of the massaging units **114b** and each of the heating units **116b** by electrical pulse or a wireless communication protocol based on the desired setting selected by the user via the control panel **112b**. Each of the massaging units **114b** and each of the heating units **116b** respond to the signals by adjusting to the desired setting. For example, a heating unit **116b** that receives the signals from the control panel **112b** to increase the temperature, would increase the current to the heating unit **116b**.

The power source **402a** and **402b** can be a battery mounted within the backrest **102**, the right armrest **104**, or the left armrest **106**. In addition to the power source **402a**, **402b** being a battery, the power source **402a**, **402b** can also be an electrical plug that enters through a surface on the massaging cushion **100**. The user would plug the electrical plug into a wall socket to supply the power to run the control panel **112**, the one or more massaging units **114**, and the one or more heating units **116**. The power source **402a**, **402b** can also be a combination of the electrical plug and the battery. For example, the battery can be a rechargeable battery that supplies the power for the massaging cushion **100** when the massaging cushion **100** is used in a location remote from a wall socket. The massaging cushion **100** can also have the electrical plug used to recharge the battery or supply power when the massaging cushion **100** is used in a location within reach of a wall socket.

The massaging cushion **100** can be constructed of a solid frame with foam or padding material located between the solid frame and a cover. The cover can be made from a variety of materials, for example, but not limited to, fabric, leather, or vinyl. The solid frame can be made of a variety of materials, for example, wood, metal, or plastic. Instead of a solid frame surrounded by padding material, the frame can also be constructed using a semi-hard foam

rubber. The semi-hard foam rubber would not require the additional padding material. The control panel **112**, massaging units **114**, and heating units **116** can be supported by the solid frame or the semi-hard foam rubber frame within the massaging cushion **100**. The massaging cushion **100** can be constructed to have a relatively flat surface profile as shown in FIGS. 1 - 3. The massaging cushion **100** can also be constructed to have a more contoured profile that conforms to the contours of the human body.

FIG. 5 is a perspective view and FIG. 6 is a top view of the massaging cushion **100** folded into a flattened position for use in a lying down position or for storage in accordance with the first exemplary embodiment of the invention. The right armrest **104** and left armrest **106** may be folded inline with the backrest **102**. This allows the massaging cushion **100** to have a rectangular shape when in the flattened position to facilitate storage. Due to rectangular shape when in the flattened position, multiple massaging cushions **100** can be stacked vertically or the massaging cushion can be easily stored on a shelf in the folded position. In addition, when in the flattened position, the massaging cushion **100** easily fits within a rectangular storage device, such as, but not limited to, a box.

The massaging cushion **100** can also be used as a massaging pillow in the folded position. The user can sit on top of the massaging cushion **100** while the massaging cushion **100** provides a massage to the lower back and thighs of the user. A user can also use the massaging cushion **100** in the folded position to prop up the chest of the user when the user is lying on their stomach. In this position the massaging cushion **100** can be used to provide a massage to the chest of the user. As previously discussed, the massaging units **114** and heating units **116** can be provided on a variety of surfaces and locations on the massaging cushion **100**. The massaging units **114** and heating units **116** can be provided on both the back surface **120** and the front

surface **118** of the backrest **102**. This allows the user to use the massaging cushion **100** in the sitting position or in the folded position as a pillow while maintaining easy access to the control panel **112**. The massaging units **114** and heating units **116** can also be centrally located within the backrest **102** so as to provide a massaging effect and heating to both the back surface **120** and the front surface **118** of the backrest **102** from within the backrest **102**.

FIG. 7 is a top view of the massaging cushion **700** folded into a flattened position for use in a lying down position or for storage in accordance with a third exemplary embodiment of the invention. In the third exemplary embodiment, the axle **108** shown in FIG. 1 does not run all the way through the backrest **102**. Instead, in the third exemplary embodiment of the right armrest **706** is coupled to the backrest **702** by a right axle **707** and the left armrest **704** is coupled to the backrest **702** by a left axle **709**. The right axle **707** and left axle **709** allow the right armrest **706** and left armrest **704** to rotate about the backrest **702**. The third exemplary embodiment also allows the right armrest **706** and left armrest **704** to rotate independently about the backrest **702**.

It should be emphasized that the above-described embodiments of the present invention are merely possible examples of implementations merely set forth for a clear understanding of the principles of the invention. Many variations and modifications may be made to the above-described embodiment(s) of the invention without departing substantially from the spirit and principles of the invention. All such modifications and variations are intended to be included herein within the scope of this disclosure and the present invention and protected by the following claims.